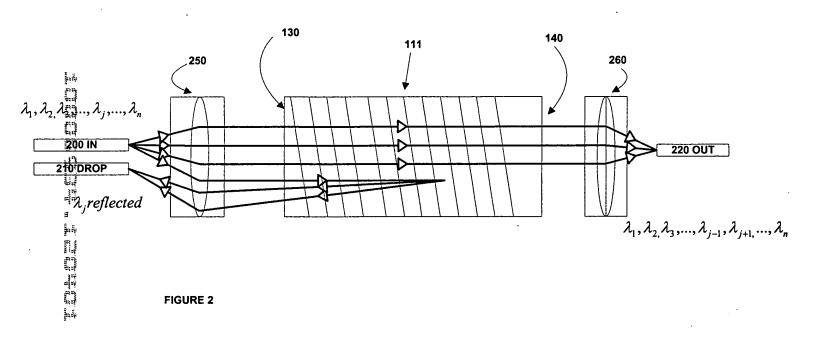
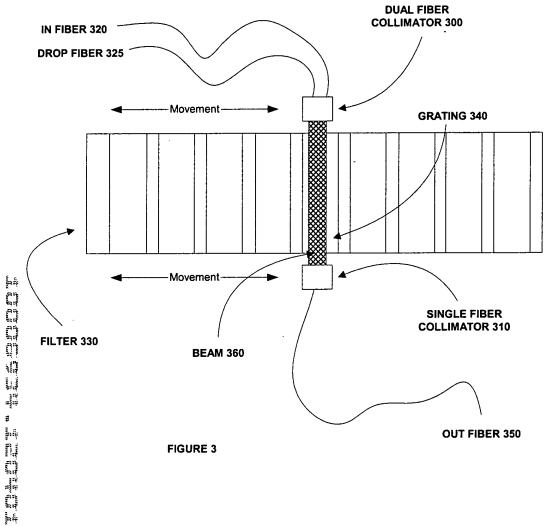


FIGURE 1





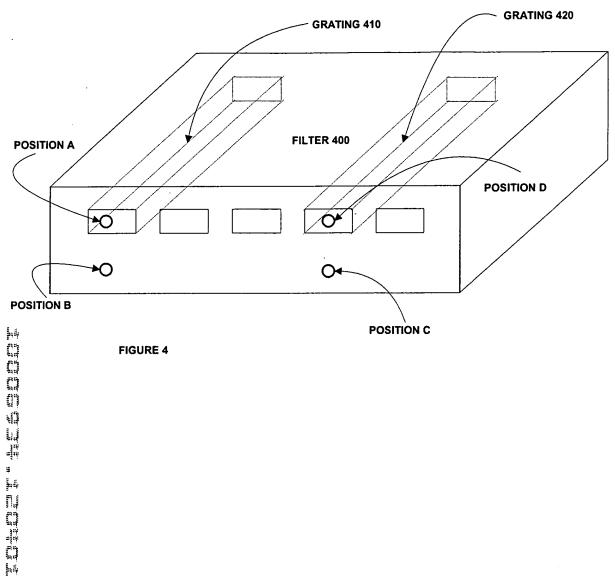


FIGURE 4

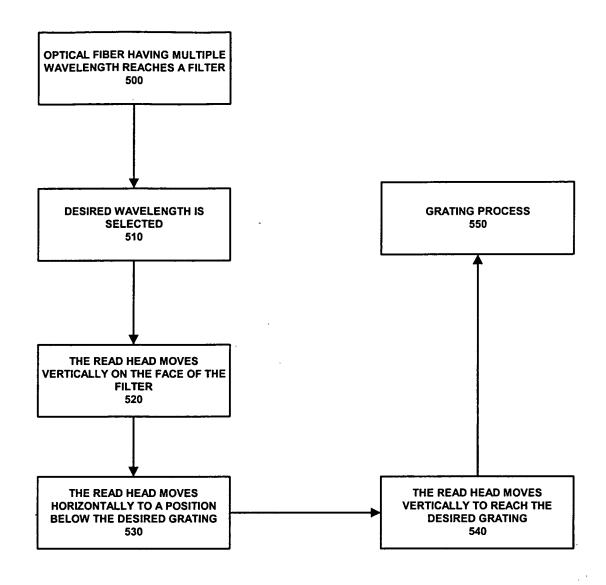


FIGURE 5

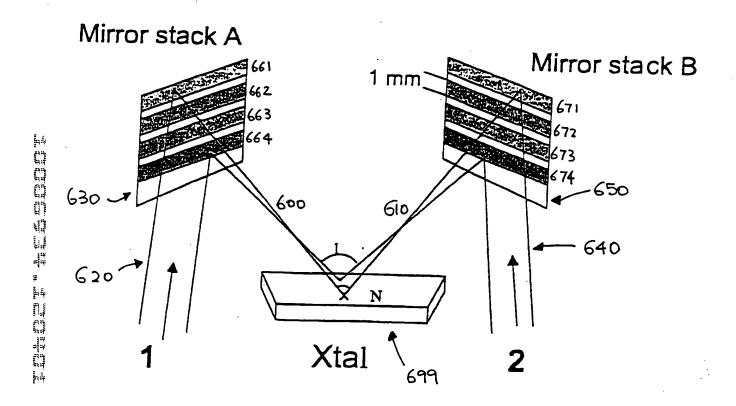


FIGURE 6

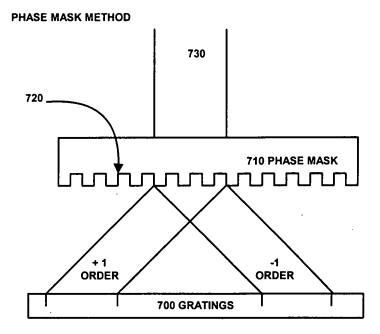
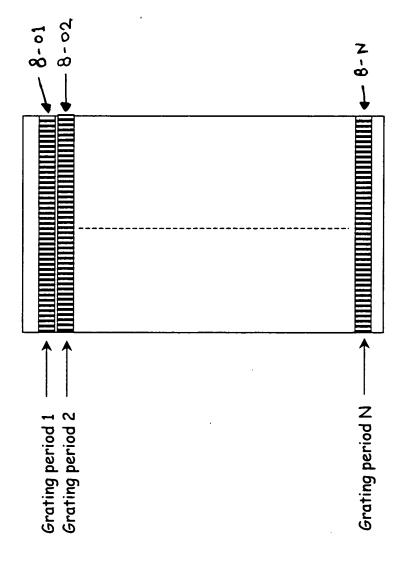
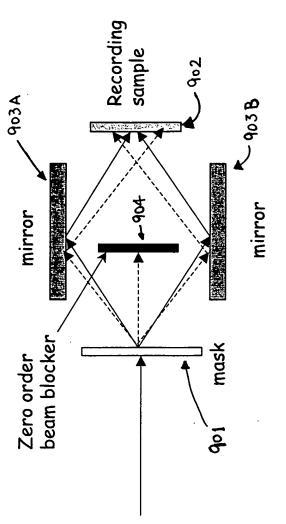


FIGURE 7

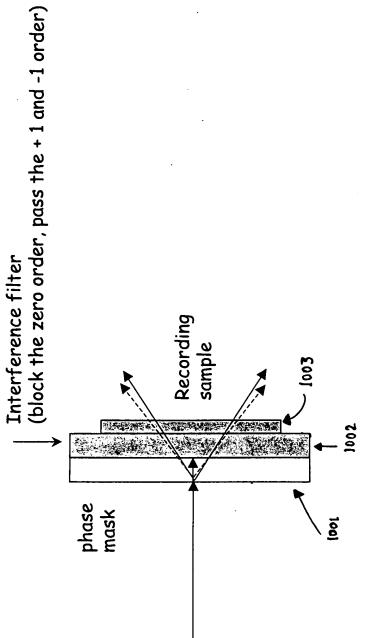


Phase mask Top view



Far field recording

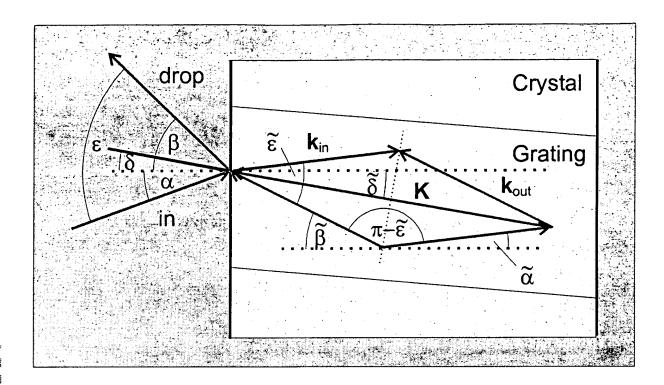
FIGURE 9



Near field recording

FIGURE 10

C



 $\tilde{\alpha}$  = input beam in the crystal;  $\alpha$  = input beam in air

 $\widetilde{\beta}$  = output beam in the crystal;  $\beta$  = output beam in air;

 $\widetilde{\epsilon}=$  full angle between the read out beams  $\,$  in the crystal;

 $\varepsilon$  = full angle between the read out beams in air;

 $\widetilde{\delta}$  = slant angle of the grating vector in the crystal at room temperature;

 $\widetilde{\delta}^{H}$  = slant angle of the grating vector in the crystal at 180 °C;

 $\delta$  = slant angle of the dual fiber collimator;

 $\mathbf{K}$  = grating vector;  $\mathbf{k}_{in}$  and  $\mathbf{k}_{out}$  = wave vectors (in and out);

 $\Lambda_{G}$  = grating period of the refractive index pattern at room temperature;

 $\Lambda_G^H$  = grating period of the refractive index pattern at 180 °C;

 $\Lambda_P$  = grating period of the phase mask;

 $\lambda_R$  = read out wavelength

 $n_{_{R}}$  = refractive index for infrared light

 $a_z = 4.5 \cdot 10^{-6} \, K^{-1}$ ;  $a_y = 1.5 \cdot 10^{-5} \, K^{-1}$ ; thermal expansion koefficients

 $T_R = 25^{\circ}$  C, read out temperature;  $T^H_R = 180^{\circ}$  C, recording temperature;  $\Delta T = 155K$ ;

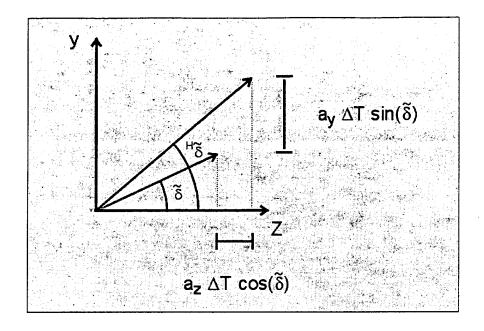


FIGURE 12

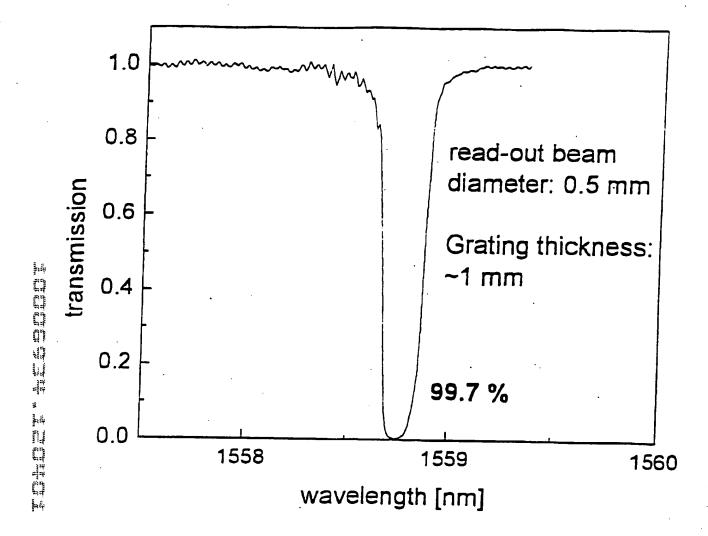


FIGURE 13

